



Air Force Research Laboratory | AFRL

Science and Technology for Tomorrow's Aerospace Forces

Success Story

AFRL SUCCESSFULLY DEMONSTRATES THEATER BALLISTIC MISSILE REASONER



Alphatech and the Information Directorate's Fusion and Intelligent Information Systems Branches demonstrated Alphatech's Theater Ballistic Missile (TBM) Reasoner at the Joint Expeditionary Force Experiment (JEFX) 2000. JEFX 2000, a large scale experiment preparing the Air Force for the challenges of the 21st century expeditionary operations, features a number of smaller experiments focusing on agile combat support and time-critical targeting. The TBM Reasoner provides the capability to support the increased operational tempo of intelligence, surveillance, and reconnaissance (ISR) collection and attack operations against TBM time-critical targets through the integration of fusion and knowledge-based technologies.



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Accomplishment

The TBM Reasoner helps identify TBM objects from sensor data in near real time and generates named areas of interest to focus ISR planning/ collection and updates of intelligence preparation of the battlefield. The TBM Reasoner also uses movement analysis/TBM identification to discriminate against postulated enemy courses of action.

Background

Current manual methods for finding TBMs are not successful. The state of practice for the identification of TBM vehicles requires analysts to sift through large amounts of data, seeking patterns of activity consistent with expected TBM vehicle behavior. Analysts do not examine as much as 80% of the data due to information overload. The TBM Reasoner uses knowledge base and other artificial intelligence techniques to assist the analyst in the near real-time identification of TBM vehicles. The general consensus of potential Air Force users of the TBM Reasoner was that the technology is extremely valuable and needed. Other potential application areas for the TBM Reasoner include locating engineering bridging units and drug smuggling watercraft.

Information
Support to the Warfighter

Additional information

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